

## REMARKS

In accordance with the foregoing, claims 33, 39, and 40 are amended. Claims 20 and 28 are cancelled without prejudice or disclaimer. Accordingly, claims 1-4, 7-12, 15-19, 21-27, and 29-40 are pending and under consideration.

### Objection to Claim 33

The Office Action objects to claim 33 because of an informality. Claim 33 is amended as suggested by the Office Action.

Accordingly, withdrawal of this rejection is respectfully requested.

### Objection to Claim 20 and 28 Under 37 C.F.R. 1.75(c)

The Office Action objects to claim 20 and 28 under 37 C.F.R. 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. This objection is respectfully traversed.

Claims 20 and 28 are cancelled without prejudice or disclaimer.

Accordingly, withdrawal of this rejection is respectfully requested.

### Rejection of Claims 1-4, 9-12, 17-20, 25-28, and 33-40 Under 35 U.S.C. §103(a)

The Office Action rejects claims 1-4, 9-12, 17-20, 25-28, and 33-40 under 35 U.S.C. §103(a) as being unpatentable over European Patent No. 1,160,787 issued to Goldstein in view of U.S. Patent No. 5,956,307 issued to Koudo et al. (hereinafter referred to as "Koudo"). This rejection is respectfully traversed.

Claims 20 and 28 are cancelled without prejudice or disclaimer.

Goldstein and Koudo, taken separately or in combination, do not disclose, teach, or suggest at least, "wherein the adjusted constant angular velocity is one step or two steps lower than the predetermined constant angular velocity, according to an extent of the data recording error," as recited in claims 1, 9, 17, 25, and 33.

In item 4 on page 3, the Office Action asserts col. 10, lines 12-15 of Goldstein teaches this feature except that Goldstein does not distinctly disclose "constant angular velocity." Applicants respectfully submit that Goldstein does not specifically disclose (1) "adjusted constant angular velocity" and (2) "predetermined constant angular velocity." Instead, Goldstein appears to refer to a drive write speed.

Although col. 32, lines 30-35 of Koudo discloses a disk rotating at a constant angular velocity, Koudo does not disclose, "wherein the adjusted constant angular velocity is one step or two steps lower than the predetermined constant angular velocity, according to an extent of the data recording error," as recited in claims 1, 9, 17, 25, and 33. Accordingly, Koudo does not cure the deficiencies of Goldstein.

Moreover, Goldstein and Koudo, taken separately or in combination, do not disclose, teach, or suggest at least, "if it is determined that the data recording error has occurred, rotating the optical disc at an adjusted constant angular velocity which is lower than the predetermined constant angular velocity, and recording the data on the optical disc that is rotating at the adjusted constant angular velocity," as recited in claim 1.

Goldstein is directed toward detecting a "buffer underrun" error which occurs if there is insufficient data in a buffer to write to an optical disc. Goldstein does not suggest changing the constant angular velocity to prevent this error from occurring. In addition, Koudo does not disclose using a constant angular velocity to resolve a "buffer underrun" error. Therefore, one having ordinary skill in the art would not have combined these references.

In *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385, 1396, (U.S. Supreme Court 2007), the Supreme Court stated,

"Often, it will be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the market place; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent issue. To facilitate review, this analysis should be made explicit. See *In re Kahn*, 441 F.3d 977,988 (CA Fed. 2006) ("[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness")."

Applicants respectfully submit that the Office Action does not articulate a reason for combining these references cited to reject the claims in a fashion claimed by the patent. Because (1) the only reason for combining these references provided by the Office Action is to reduce heat and (2) heat reduction is not recited in the claims, Applicants respectfully submit that the Office Action has not articulated a proper reason for combining the references.

Therefore, for at least these reasons, claims 1, 9, 17, 25, and 33 are patentably distinguishable over the cited references.

Claims 2-4, 7, 8, and 37 depend from claim 1 and include all of the features of claim 1. Therefore, for at least these reasons, claims 2-4, 7, 8, and 37 are patentably distinguishable from the cited references.

Goldstein and Koudo, taken separately or in combination, do not disclose, teach, or suggest at least, "if it is determined that the data reproduction error has occurred, rotating the optical disc at an adjusted constant angular velocity which is lower than the predetermined constant angular velocity, and reproducing the data from the optical disc," as recited in claim 9. Therefore, for at least these reasons, claim 9 is patentably distinguishable from the cited references.

Claims 10-12, 15, 16, and 38 depend from claim 9 and include all of the features of claim 9. Therefore, for at least these reasons, claims 10-12, 15, 16, and 38 are patentably distinguishable from the cited references.

Goldstein and Koudo, taken separately or in combination, do not disclose, teach, or suggest at least, "a controller which, in response to the recording error signal, determines whether the data recording error occurs, and if it is determined that the data recording error has occurred, controls the motor driver to rotate the optical disc at an adjusted constant angular velocity which is lower than a predetermined constant angular velocity," as recited in claims 17 and 25. Therefore, for at least these reasons, claims 17 and 25 are patentably distinguishable from the cited references.

Claim 18, 19, 21-24, and 39 depend from claim 17 and include all of the features of claim 17. Therefore, for at least these reasons, claims 18, 19, 21-24, and 39 are patentably distinguishable from the cited references.

Claims 26, 27, 29-32 and 40 depend from claim 25 and include all of the features of claim 25. Therefore, for at least these reasons, claims 26, 27, 29-32 and 40 are also patentably distinguishable from the cited references.

Goldstein and Koudo, taken separately or in combination, do not disclose, teach, or suggest at least, "if it is determined that the data recording error has occurred, rotating the optical disc at an adjusted constant angular velocity which is lower than the predetermined constant angular velocity, and recording the data on the optical disc that is rotating at the adjusted constant angular velocity," as recited in claim 33. Therefore, for at least these reasons, claim 33 is patentably distinguishable from the cited references.

Claims 34-36 depend from claim 33 and include all of the features of claim 33. Therefore, for at least these reasons, claims 34 and 35 are patentably distinguishable from the cited references.

Accordingly, withdrawal of this rejection is respectfully requested.

Rejection of Claims 7, 8, 15, 16, 21-24, and 29-32 Under 35 U.S.C. §103(a)

The Office Action rejects claims 7, 8, 15, 16, 21-24, and 29-32 under 35 U.S.C. §103(a) as being unpatentable over Goldstein and Koudo and further in view of U.S. Patent No. 7,092,334 issued to Choi et al. (hereinafter referred to as "Choi"). This rejection is respectfully traversed.

Choi does not cure the deficiencies of Goldstein and Koudo.

As discussed above, Goldstein is directed toward detecting a "buffer underrun" error which occurs if there is insufficient data in a buffer to write to an optical disc. Goldstein does not suggest changing the constant angular velocity to prevent this error from occurring. In addition, Koudo and Choi do not disclose using a constant angular velocity to resolve a "buffer underrun" error. In addition, Goldstein and Koudo are not directed toward resolving any errors caused by disc defects. Therefore, one having ordinary skill in the art would not have combined these references.

Accordingly, Goldstein, Koudo, and Choi, taken separately or in combination, do not disclose, teach, or suggest at least, "wherein the adjusted constant angular velocity is one step or two steps lower than the predetermined constant angular velocity, according to an extent of the data recording error," as recited in claims 1, 9, 17, and 25.

Goldstein, Koudo, and Choi, taken separately or in combination, also do not disclose, teach, or suggest at least, "if it is determined that the data recording error has occurred, rotating the optical disc at an adjusted constant angular velocity which is lower than the predetermined constant angular velocity, and recording the data on the optical disc that is rotating at the adjusted constant angular velocity," as recited in claim 1. Therefore, for at least these reasons, claims 1, 9, 17, and 25 are patentably distinguishable from the cited references.

Claims 7 and 8 depend from claim 1 and include all of the features of claim 1. Therefore, for at least these reasons, claims 7 and 8 are patentably distinguishable from the cited references.

Goldstein, Koudo, and Choi, taken separately or in combination, do not disclose, teach, or suggest at least, "if it is determined that the data reproduction error has occurred, rotating the optical disc at an adjusted constant angular velocity which is lower than the predetermined constant angular velocity, and reproducing the data from the optical disc," as recited in claim 9. Therefore, for at least these reasons, claim 9 is patentably distinguishable from the cited references.

Claims 15 and 16 depend from claim 9 and include all of the features of claim 9. Therefore, for at least these reasons, claims 15 and 16 are patentably distinguishable from the cited references.

Goldstein and Koudo, taken separately or in combination, do not disclose, teach, or suggest at least, “a controller which, in response to the recording error signal, determines whether the data recording error occurs, and if it is determined that the data recording error has occurred, controls the motor driver to rotate the optical disc at an adjusted constant angular velocity which is lower than a predetermined constant angular velocity,” as recited in claims 17 and 25. Therefore, for at least these reasons, claims 17 and 25 are patentably distinguishable from the cited references.

Claim 21-24 depend from claim 17 and include all of the features of claim 17. Therefore, for at least these reasons, claims 21-24 are patentably distinguishable from the cited references.

Claims 29-32 depend from claim 25 and include all of the features of claim 25. Therefore, for at least these reasons, claims 29-32 are also patentably distinguishable from the cited references.

Moreover, Goldstein, Koudo, and Choi, taken separately or in combination, do not disclose, teach, or suggest at least, “wherein the determining whether the data recoding error occurs due to the defect of the optical disc is accomplished using at least one of a focus error signal, a tracking error signal, and an ATIP sync signal,” as recited in claim 8. As indicated on page 13 of the Office Action, the cited Goldstein and Koudo not disclose a disc defect detection method.

As discussed above, Goldstein is directed toward detecting a “buffer underrun” error which occurs if there is insufficient data in a buffer to write to an optical disc. Goldstein does not suggest changing the constant angular velocity to prevent this error from occurring. In addition, Koudo and Choi do not disclose using a constant angular velocity to resolve a “buffer underrun” error. In addition, Goldstein and Koudo are not directed toward resolving any errors caused by disc defects. Therefore, one having ordinary skill in the art would not have combined these references.

In *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385, 1396, (U.S. Supreme Court 2007), the Supreme Court stated,

“Often, it will be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the market place; and the background knowledge possessed by a person having ordinary skill in the art, all in order to

determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent issue. To facilitate review, this analysis should be made explicit. *See In re Kahn*, 441 F.3d 977,988 (CA Fed. 2006) (“[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness”).”

Applicants respectfully submit that the Office Action does not articulate a reason for combining these references cited to reject the claims in a fashion claimed by the patent. Because (1) the only reason for combining these references provided by the Office Action is to reduce heat and (2) heat reduction is not recited in the claims, Applicants respectfully submit that the Office Action has not articulated a proper reason for combining the references.

Similarly, Goldstein, Koudo, and Choi, taken separately or in combination, do not disclose, teach, or suggest at least, “using at least one of a focus error signal, a tracking error signal, and an ATIP sync signal to determine whether the data reproduction error occurs due to a defect of the optical disc,” as recited in claim 16.

Similarly, Goldstein, Koudo, and Choi, taken separately or in combination, do not disclose, teach, or suggest at least, “wherein the controller determines the data recording error occurs when a value of the focus error signal or the tracking error signal exceeds a predetermined range, or errors occur in at least a predetermined number of ATIP sync signals to be periodically input,” as recited in claims 23 and 30.

Therefore, for at least these reasons, claims 8, 16, 23, and 30 are patentably distinguishable over the cited references.

Accordingly, withdrawal of this rejection is respectfully requested.

#### Summary

Claims 1-4, 7-12, 15-19, 21-27, and 29-40 are pending and under consideration. It is respectfully submitted that none of the references taken alone or in combination disclose the present claimed invention.

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

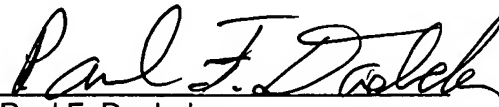
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If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

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